

against the roller; therefore, when the milling machine table is fed in a lengthwise direction, the former and liner turn in unison as the curved section of the opening is milled. Two lugs on the hub of the weight lever alternately engage a stop as the lever is turned from one position to the other, and in this way either the lower or upper sides in the master former are held against, the roller ('. The liner has a similar opening on the opposite side, which is milled by simply connecting the upper end of link *I*) with the opposite end /*' of the double extension arm (see end view, Fig. .».?).

Duplex Fixture for Routing Oil-grooves. A duplex type of fixture used for routing oil-grooves in brott./r bushings is shown in Fig. 23. The routing operation is performed on two bushings simultaneously, and a drilling tnudmtr is used for the operation. The* oil-grooves of tin* l»u*lwms in this particular case, extend around about two thirds of the circumference of the busliing and branch out into a Y shape at each end. The horizontal spindle of the lixttirr 5* rotated for feeding the bushing past tin* routing tooN, by fuutdwtrrl .-J_t which serves to revolve a worm meshing \with wheel *Li*. The axial movement of the fixture spindlr is drrivrd from earn grooves on each side of gear /I The* shafts (* and *I*> t any ing Uu* rollers have ruck teeth which engage fttr segment tfrars formed on the pivoted lever *K*. By swinging this h-vrr in ow direction or the other, the rollers arr alternately ciwa^rd. When the left-hand roller is eitiwd with its tarn grum^ the left-hand branches of the Y-shaped oil grooves nn ea«h bushing are milled, and wlien thr right hand r«*l!rr is in»vr«t iuvvurci the right-hand liranchrn of lite oil groovrs arr tnillrd.

Planing Fixtures* Fixtunvw for planing an- as rvsriilbl for interchangealilc manufailurin^ a-« art* drilling ji^s or milling fixtures. Planing lixtur«s >rrvr primarily t!ir purport* of locating and holding tlu* work, Init tiiry arr oftru j»r»*viilrd with sHting pieces or teniplrfn whuh ;m* UM-*! ior Nrtjim* fit** «lilting tools so that the work i* atwa;i^ hiurd in a trrtahi relation to

the locating mams on tin- if^lf, S*.»tur
also have this fool-si'ttini; fratur.

The kind of In- iMvi<rm*d t>v thr